NASA's Origins Program:
The Search for Our Cosmic Roots and,.....Galactic Cousins

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NASA's Origins Program seeks the answers to two fundamental questions:

- How Did We Get Here?
- Are We Alone?

Questions so remarkably simple they can be discussed with elementary school children, yet so staggeringly profound as to challenge the world's science community – and engage the man on the street.

Humans are made up of 100 trillion cells with each cell made of such macromolecules as proteins and DNA. These macromolecules, in turn, are composed of elements spewed out of dying stars billions of years ago. We **are**, therefore, made up of stardust. To answer how did we get here, Origins endeavors to better understand the chain of events over the lifespan of the Universe -- from the Big Bang to formation of the earliest structure in the Universe, the formation of galaxies, stars and the biogenic elements, formation of planetary systems and finally emergence of life from non-life on Earth.

The search for extraterrestrial life (primative or complex) takes us on a search for other planetary systems with planets in the habitable zone. Further, we need to understand how various lifeforms alter their environments and how these changes can be remotely detected from the Earth. The Origins Program searches for the "smoking gun" that would indicate biological activity on some extra-solar planets.

In pursuit of these quests NASA is developing an array of observatories (telescopes and interferometers) with extraordinary sensitivity and resolution. This talk will provide an overview of the Origins Program and will outline its technological and scientific pursuit.